

What is claimed is:

1. A method of treating the surface of mechanically abraded glass, the method comprising the steps of:
 - 5 providing a glass substrate having opposing first and second surfaces, the glass substrate having a recess in the first surface formed by mechanical abrasion;
 - heating the glass substrate to its softening point; and
 - holding the glass substrate at its softening point for a predetermined period of time to polish the recess.

2. The method of claim 1, wherein the providing step includes providing Pyrex 7740 glass, and the heating step includes heating to a temperature of about 821 Celsius.

5

3. The method of claim 1, wherein the holding step includes holding the glass substrate at its softening point for at least five minutes.

4. The method of claim 1, further comprising the steps of mechanically 10 planarizing and polishing the first surface to a condition of substantial flatness.

5. The method of claim 4, wherein the providing step includes providing a second substrate with a top surface, and further comprising the step of attaching the first surface of the glass substrate to the top surface of the second substrate to provide 15 a hermetically sealed cavity defined by the recess in the first surface of the glass substrate and the top surface of the second substrate.

6. The method of claim 5, wherein the providing step includes providing a via through the glass substrate and a conductive cover on the top surface of the 20 second substrate opposing the via, and wherein the attaching step comprises anodic bonding the glass substrate to the conductive cover such that the conductive cover covers the via.

7. The method of claim 6, wherein the second substrate and conductive 25 cover are made of silicon.

8. A method of treating the surface of mechanically abraded glass, the method comprising the steps of:

providing a glass substrate having opposing first and second surfaces,

5 the glass substrate having a recess in the first surface and at least one via in the glass substrate that extends through the glass substrate from the first surface to the second surface, wherein the recess and at least one via are formed by sand blasting;

10 heating the glass substrate to its softening point;

holding the glass substrate at its softening point for a predetermined period of time to polish the recess and the at least one via; and planarizing and polishing the first surface to a condition of substantial flatness.

15

9. The method of claim 8 wherein the providing step includes providing Pyrex 7740 glass, and wherein the heating step includes heating to a temperature of about 821 Celsius, and wherein the holding step includes holding the glass substrate at its softening point for at least five minutes.

5

10. The method of claim 8, wherein the providing step includes providing a second substrate with a top surface, and further comprising the step of attaching the first surface of the glass substrate to the top surface of the second substrate to provide a hermetically sealed cavity defined by the recess in the first surface of the glass
10 substrate and the top surface of the second substrate.

11. The method of claim 10, wherein the providing step includes providing a silicon conductive cover on the top surface of the second substrate, and wherein the attaching step comprises anodic bonding the glass substrate to the conductive cover
15 such that the conductive cover covers the via.

12. The method of claim 10, further comprising the step of metallizing an interior surface of the at least one via to provide an electrical connection from outside of the package to inside of the recess through the via metallization and the conductive
20 cover.

13. The method of claim 12, further comprising the step of filling the vias with solder to provide a hermetic seal.

14. A method of treating the surface of sand blast drilled glass, the method comprising the steps of:

providing a glass substrate having opposing first and second surfaces

and a second substrate with a top surface, the glass substrate

5 having a recess in the first surface formed by sand blasting and at least one sand blasted via in the glass substrate that extends through the glass substrate from the first surface to the second surface;

heating the glass substrate to its softening point;

10 holding the glass substrate at its softening point for a predetermined period of time to polish the recess and the at least one via; and attaching the first surface of the glass substrate to the top surface of the second substrate to provide a hermetically sealed cavity defined by the recess in the first surface of the glass substrate and the top surface of the second substrate.

15. The method of claim 14, wherein the providing step includes providing Pyrex 7740 glass, and wherein the heating step includes heating to a temperature of about 821 Celsius, and wherein the holding step includes holding the glass substrate at its softening point for at least five minutes.

5

16. The method of claim 14, wherein before the attaching step further comprising the step of planarizing and polishing the first surface to a condition of substantial flatness.

10

17. The method of claim 14, wherein the providing step includes providing a silicon conductive cover between the first surface of the glass substrate and the top surface of the second substrate, and wherein the attaching step comprises anodic bonding the glass substrate to the conductive cover such that the conductive cover covers the via.

15

18. The method of claim 14, further comprising the step of metallizing an interior surface of the at least one via to provide an electrical connection from outside of the package to inside of the recess through the via metallization and the conductive cover.

20

19. The method of claim 18, further comprising the step of filling the vias with solder to provide a hermetic seal.